SANTA CRUZ BIOTECHNOLOGY, INC.

Max (H-2): sc-8011

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

It is now well established that the nature and relative abundance of individual subunits of different classes of transcription factors can positively or negatively regulate levels of gene expression. Myc proteins homodimerize and bind DNA poorly, if at all, at physiological levels. Max is a nuclear localized bHLH-Zip protein initially identified by screening a B cell expression library with the bHLH-Zip region of c-Myc. Max homodimers and the Myc-Max heterodimers bind the sequence CACGTG; however the binding of the heterodimeric complex is stronger than the Max homodimer. The Max gene products have been identified as Max and Max 9, proteins that differ by a 9 amino acid insertion N-terminal to the basic region. In contrast to Myc, which is highly regulated during progression through the cell cycle, Max is highly stable and is much more abundant than Myc. Two members of the bHLH-Zip protein family, designated Mad and Mxi 1, homodimerize poorly but form heterodimeric complexes with Max that have opposing functions to Myc-Max heterodimers with respect to regulation of gene expression.

REFERENCES

1. Jones, N. 1990. Transcriptional regulation by dimerization: two sides to an incestuous relationship. Cell 61: 9-11.
2. Dang, C.V., et al. 1991. Intracellular leucine zipper interactions suggest c-Myc hetero-oligomerization. Mol. Cell. Biol. 11: 954-962.
3. Blackwood, E.M. and Eisenman, R.N. 1991. Max: a helix-loop-helix zipper protein that forms a sequence-specific DNA-binding complex with Myc. Science 251: 1211-1217.

CHROMOSOMAL LOCATION

Genetic locus: MAX (human) mapping to 14q23.3; Max (mouse) mapping to 12 C3.

SOURCE

Max (H-2) is a mouse monoclonal antibody raised against amino acids 28-151 mapping at the C-terminus of Max p21 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8011 X, 200 µg/0.1 ml.

Max (H-2) is available conjugated to agarose (sc-8011 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8011 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8011 PE), fluorescein (sc-8011 FITC), Alexa Fluor® 488 (sc-8011 AF488), Alexa Fluor® 546 (sc-8011 AF546), Alexa Fluor® 594 (sc-8011 AF594) or Alexa Fluor® 647 (sc-8011 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8011 AF680) or Alexa Fluor® 790 (sc-8011 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Max (H-2) is recommended for detection of Max p21 and Max p22 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Max (H-2) is also recommended for detection of Max p21 and Max p22 in additional species, including canine.

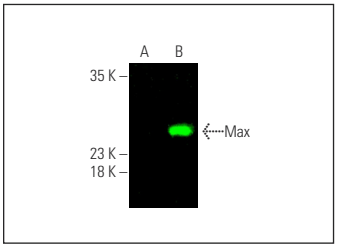
Suitable for use as control antibody for Max siRNA (h): sc-38079, Max siRNA (m): sc-38080, Max shRNA Plasmid (h): sc-38079-SH, Max shRNA Plasmid (m): sc-38080-SH, Max shRNA (h) Lentiviral Particles: sc-38079-V and Max shRNA (m) Lentiviral Particles: sc-38080-V.

Max (H-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

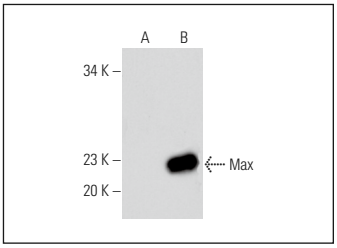
Molecular Weight of Max: 26 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, HeLa nuclear extract: sc-2120 or Max (h): 293T Lysate: sc-114184.

DATA



Max (H-2): sc-8011. Near-infrared western blot analysis of Max expression in non-transfected: sc-117752 (**A**) and human Max transfected: sc-114184 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



Max (H-2): sc-8011. Western blot analysis of Max expression in non-transfected: sc-117752 (**A**) and human Max transfected: sc-114184 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. de Nigris, F., et al. 2000. Evidence for oxidative activation of c-Myc-dependent nuclear signaling in human coronary smooth muscle cells and in early lesions of Watanabe heritable hyperlipidemic rabbits: protective effects of vitamin E. Circulation 102: 2111-2117.
2. Carabet, L.A., et al. 2018. Computer-aided drug discovery of Myc-Max inhibitors as potential therapeutics for prostate cancer. Eur. J. Med. Chem. 160: 108-119.
3. Li, M., et al. 2019. Zinc-finger protein YY1 suppresses tumor growth of human nasopharyngeal carcinoma by inactivating c-Myc-mediated microRNA-141 transcription. J. Biol. Chem. 294: 6172-6187.

RESEARCH USE

For research use only, not for use in diagnostic procedures.